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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,607	03/22/2001	Rick V. Murakami	36360/1.14	4149
32642 7590 12/19/2008 STOEL RIVES LLP - SLC 201 SOUTH MAIN STREET, SUITE 1100 ONE UTAH CENTER SALT LAKE CITY, UT 84111			EXAMINER MOORTHY, ARAVIND K	
			ART UNIT 2431	PAPER NUMBER
			MAIL DATE 12/19/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/814,607

Applicant(s)

MURAKAMI ET AL.

Examiner

Aravind K. Moorthy

Art Unit

2431

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 5-19, 28, 29, 31, 32 and 35-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-19, 28, 29, 31, 32 and 35-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date see attachment
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: _____

DETAILED ACTION

1. This is in response to the communications filed on 7 November 2008.
2. Claims 1, 3, 5-19, 28, 29, 31, 32 and 35-52 are pending in the application.
3. Claims 1, 3, 5-19, 28, 29, 31, 32 and 35-52 have been rejected.
4. Claims 2, 4, 20-27, 30, 33 and 34 have been cancelled.

Continued Examination Under 37 CFR 1.114

5. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 January 2007 has been entered.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 3, 5-19, 28, 29, 31, 32 and 35-52 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3, 5-19, 28, 29, 31, 32 and 35-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Stone et al US 2001/0033220 A1 (hereinafter Stone).

As to claim 1, Stone discloses a computer-implemented method for biometric authentication, the method comprising:

reading a first unique, heartbeat waveform of an individual [0025];

analyzing the waveform to identify unique traits [0026];

reading a second unique, internal physiological trait of the individual [0023]; and

authenticating the identity of the individual if both the waveform and the physiological trait correspond with previously enrolled traits recorded for the individual [0032].

As to claim 3, Stone discloses that the first unique, heartbeat waveform_biological-trait is measured by reflecting light off of the subdermal layers of skin tissue on the individual [0018-0019].

As to claim 5, Stone discloses that the step of authenticating is performed by a portable computerized device [0015].

As to claim 6, Stone discloses weighting some quantitative features of the biological traits more than other quantitative features of the biological traits [0023-0024].

As to claim 7, Stone discloses means for verifying physiological activity [0016].

As to claims 8, 17 and 37, Stone discloses that the second unique, internal physiological trait comprises the light absorption characteristics of the skin tissue of the individual [0023].

As to claim 9, Stone discloses a method comprising:

reading a first live internal biological identifier of an individual, the first live internal biological identifier being a heartbeat waveform measured by reflecting light off of the subdermal layers of skin tissue on the individual [0025];

reading a second live internal biological identifier of the individual [0023];

and

authenticating the identity of the individual if both of the biological identifiers correspond with previously enrolled biological identifiers taken for the individual [0032].

As to claim 10, Stone discloses that the second live internal biological identifier comprises the depth of a previously-identified layer of epithelial tissue [0023].

9.

As to claim 11, Stone discloses a method comprising:

reading a first live internal biological identifier of an individual, the first live internal biological identifier being a heartbeat waveform measured by reflecting light off of the subdermal layers of skin tissue on the individual [0025];

analyzing the waveform to identify unique traits [0026];

reading a second live internal biological identifier of the individual, the second live internal biological identifier comprising bone density [0023]; and

authenticating the identity of the individual if both of the biological identifiers correspond with previously enrolled biological identifiers taken for the individual [0032].

As to claims 12 and 31, Stone discloses that the second live internal biological identifier comprises the retinal pattern of an iris [0019].

As to claims 13, 18 and 32, Stone discloses that the method is performed by a single computer chip [0015].

As to claim 14, Stone discloses that the single computer chip is incorporated into a personal digital assistant [0015].

As to claims 15 and 19, Stone discloses weighting some quantitative features of the biological identifiers more than other quantitative features of the biological identifiers [0023-0024].

As to claim 16, Stone discloses a method comprising:

presenting an individual's live body tissue to an authenticating device for the capturing of a first unique, heartbeat waveform of the individual [0025];

analyzing the waveform to identify unique features [0026];

providing a second unique, internal physiological identifier of the individual to the authentication device [0023];

authenticating the second physiological identifier by comparing the unique features with those recorded for that individual [0032]; and

upon authentication by the device, operating the device to perform functions previously inaccessible to unauthorized individuals, the authentication taking place upon the matching of both of the biological identifiers with previously enrolled physiological identifiers taken for the individual [0033].

As to claim 28, Stone discloses a computer-readable medium comprising instructions for:

- reading a unique heartbeat waveform of an individual [0025];
- analyzing the waveform to identify unique traits [0026];
- analyzing the waveform to identify unique traits [0026];
- reading a second unique, internal physiological identifier of the individual [0023]; and
- authenticating the identity of the individual if both the waveform and the physiological identifier correspond with previously enrolled identifiers recorded for the individual [0032].

As to claim 29, Stone discloses that the second internal physiological identifier comprises the depth of a previously-identified layer of epithelial tissue [0023].

As to claim 35, Stone discloses a layered biometric authentication system comprising:

- a portable computerized device having an infrared emitter and detector operably connected to a single computer chip [0015];
- means for capturing a first unique heartbeat waveform of an individual, the means being located on the portable device and operably connected to the computer chip, the waveform being measured by reflecting light off of the subdermal layers of skin tissue on the individual [0025];
- means for analyzing the waveform to identify unique traits [0026];
- means for capturing a second internal physiological identifier of the individual, the means for reading the second biological identifier being located on the portable device and operably connected to the computer chip [0023];

means for verifying physiological activity, the verifying means being operably connected to the computer chip; and means for authenticating the identity of the individual if both of the waveform and the physiological identifier correspond with previously enrolled identifiers recorded for the individual, the means for authenticating weighting some quantitative features of the identifiers more than other quantitative features of the identifiers [0032-0033].

As to claim 36, Stone discloses that the second unique, internal physiological identifier is measured by reflecting light off of the skin of the individual [0018-0019].

As to claims 38, 41, 44, 47 and 50, Stone discloses that analyzing the heartbeat waveform includes filtering and normalizing the heartbeat waveform [0026].

As to claim 39, 42, 45, 48 and 51, Stone discloses that analyzing the heartbeat waveform includes analyzing a diastolic notch [0026].

As to claim 40, 43, 46, 49 and 52, Stone discloses that analyzing the heartbeat waveform includes analyzing two peak amplitudes [0026].

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K. Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aravind K Moorthy/
Examiner, Art Unit 2431

/Christopher A. Revak/
Primary Examiner, Art Unit 2431